Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte PETER KARL MATZINGER, MICHELANGELO SCALONE and ULRICH ZUTTER

Application No. 2003-2146 Application No. 09/546,143¹

ON BRIEF²

MAILED

AUG 3 1 2004

U.S. PATENT AND TRADEMARK OFFICE BOARD OF PATENT APPEALS AND INTERFERENCES

Before WINTERS, SCHEINER, and ADAMS, <u>Administrative Patent Judges</u>.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 12, 14, 15, 17, 19, 21, 23 and 25.

Notwithstanding appellants indication (Brief, page 2) that no claims have been cancelled, claims 1-9 are cancelled. See Paper No. 2, page 2. Of the remaining pending claims, the examiner has:

 objected to claims 13, 16, 18, 20, 22 and 24 as being dependent upon a rejected base claim, but would be allowable if rewritten in

¹ The instant application is a divisional of Application No. 09/195,512, filed Apr. 3, 1997, now U.S. Patent No. 5,902,882, issued May 11, 1999, which is a continuation of Application No. 08/832,253, filed Nov. 19, 1998, now U.S. Patent No. 6,069,245, issued May 30, 2000.

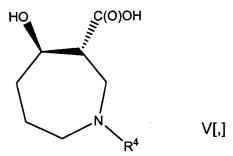
² In accordance with 37 CFR 1.194(c), the Board decided that an oral hearing was not necessary in this appeal.

independent form (See Paper No. 3, page 6 and Paper No. 9, page 4); and

• indicated that claims 10, 11 and 27 are allowable (See Paper No. 3, page 7, and Paper No. 9, page 4).

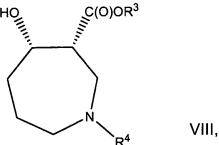
Claims 12, 17, 23 and 25 are illustrative of the subject matter on appeal and are reproduced below:

12. A compound selected from the group consisting of compounds of the formula



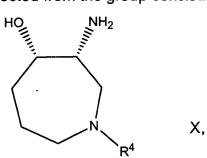
wherein R4 is an amino-protecting group.

17. A compound selected from the group consisting of compounds of the formula



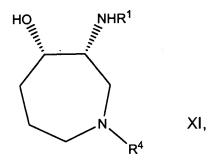
wherein R³ is lower alkyl and R⁴ is an amino-protecting group, in the absence of substantial amounts of other enantiomers of the compound.

23. A compound selected from the group consisting of compounds of the formula



wherein R⁴ is an amino-protecting group.

25. A compound selected from the group consisting of compounds of the formula



wherein R¹ is an acyl residue of an aromatic carboxylic acid and R⁴ is an amino protecting group.

The references relied upon by the examiner are:

Barbier et al. (Barbier)

5,583,222

Dec. 10, 1996

(102(e) date Jan. 4, 1995)

Adams et al. (Adams), "Total synthesis of balanol: a potent protein kinase C inhibitor of fungal origin," J. Chem. Soc. Perkin Trans. I, pp. 2355-62 (1975)

Krogsgaard-Larsen et al. (Krogsgaard-Larsen), "Inhibitors of GABA Uptake. Syntheses and 1H NMR Spectroscopic Investigations of Guvacine, (3RS, 4SR)-4-Hydroxypiperidine-3-carboxylic Acid, and Related Compounds," <u>Acta Chemica Scandinavica B</u>, Vol. 32, pp. 327-34 (1978)

L. G. Wade, Jr. (Wade), <u>Organic Chemistry</u> 103 and 115 (Prentice-Hall, Inc., 1987)

GROUND OF REJECTION

Claims 12, 14, 15, 17, 19, 21, 23 and 25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in the recitation of the phrase "amino protecting group."

Claims 12, 14, 15, 17, 19, 21, 23 and 25 stand rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure that fails to enable the full scope of the claimed invention.

Claim 17 stands rejected under 35 U.S.C. § 102(b) as anticipated by Krogsgaard-Larsen.

Claims 23 and 25 stand rejected under 35 U.S.C. § 102(b) as anticipated by Adams.

Claim 25 stands rejected under 35 U.S.C. § 102(e) as anticipated by Barbier.

Claims 25 and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Barbier.

We reverse.

DISCUSSION

THE REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH:

The claims are directed to a compound selected from the group consisting of compounds of a specified formula wherein one of the substituents, R⁴, set forth in the specified formula is an amino-protecting group. According to the examiner (Answer, page 4), the "claims recite the limitation of 'amino protecting group' which has no description in the specification other than 'tert.-butoxycarbonyl' as a sole representative of said group. Thus, one skilled in the art cannot ascertain what other groups can be considered as an 'amino[-]protecting group'." We note, however, while the examiner asserts (id.) that the specification describes "tert.-butoxycarbonyl" as a sole representative of an "amino-protecting group," the examiner later finds (Answer, bridging sentence, pages 4-5), the specification provides an enabling description of tert-

butyl ester, tert-butyl carboxylate, and tert-butoxycarbonyl as amino-protecting groups within the scope of R⁴ as set forth in appellants' claimed invention.

For their part, appellants assert (Brief, page 4), "[t]he term 'aminoprotecting group', as used in the rejected claims, is well-known in the art to which
this invention belongs, organic synthesis." In support of this assertion appellants
rely on the table of contents to chapter 7 of Green³ to demonstrate that "amino
protecting groups' are well-known and exemplified by many members, all of
which are within the skill of the art of organic synthesis." We find it noteworthy to
mention that the title of this chapter (chapter 7) of Green is "Protection for The
Amino Group."

In response, the examiner argues (Answer, page 7, emphasis removed), "it is still unclear whether the scope of 'amino protecting group' includes groups cited by Green, or goes beyond that." The examiner makes a similar argument (id.) with respect to appellants' assertion (Brief, page 4) that other patents have issued "with the term 'amino protecting groups' in the claims." On consideration of the record before us, we agree with appellants that the phrase "amino protecting group" is a term of art. Accordingly, we disagree with the examiner's conclusion that the phrase is indefinite to those of skill in the art.

As set forth in <u>Amgen Inc. v. Chugai Pharmaceutical Co., Ltd.</u>, 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir. 1991):

The statute requires that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." A

³ Theodora W. Greene (Green), <u>Protective Groups in Organic Synthesis</u>, pp. 218-22, Table of Contents to Chapter 7, "Protection for The Amino Group" (John Wiley and Sons, 1981).

decision as to whether a claim is invalid under this provision requires a determination whether those skilled in the art would understand what is claimed. See Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed. Cir. 1985) (Claims must "reasonably apprise those skilled in the art" as to their scope and be "as precise as the subject matter permits.").

Furthermore, claim language must be analyzed "not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary skill in the pertinent art." In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Whether a claim is indefinite under 35 USC § 112, second paragraph, depends upon whether those skilled in the art would understand what is claimed, or the scope or the bounds of the claim, when read in light of the specification. The threshold step in resolving this issue is to determine whether the examiner has met his burden of proof by advancing acceptable reasoning of indefiniteness.

Accordingly, we disagree with the examiner's assertion (Answer, page 7) that "[t]he issue of indefiniteness is not whether one skilled in the art can understand a term (or terms), rather it is the metes and bounds of the invention." As set forth in Amgen, a decision as to whether a claim is invalid under 35 U.S.C § 112, second paragraph, requires a determination as to whether those skilled in the art would understand what is claimed. Based on the examiner's assertion (Answer, page 7), and the evidence of record, it appears that there is no dispute that a person of ordinary skill in the art would understand what is claimed. Instead, it appears that the examiner is concerned solely with the breadth of the

claimed invention. In this regard, we would agree with the examiner that the scope of the claim is extremely broad. However, as the examiner recognizes (Answer, page 7), "breadth is not indefiniteness...." In re Miller, 441 F.2d 689, 693, 169 USPQ 597, 600 (CCPA 1971) ("[B]readth is not to be equated with indefiniteness.").

In our opinion, when the claims are considered as a whole, together with the prior art and appellants' disclosure, a person of ordinary skill in the art would understand what is claimed. Accordingly, we reverse the rejection of claims 12, 14, 15, 17, 19, 21, 23 and 25 under 35 U.S.C. § 112, second paragraph.

THE REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH:

While the examiner finds (Answer, page 5), appellants' disclosure enabling for the amino protecting group (R⁴), "as a tert-butyl ester, tert-butyl carboxylate, or tert-butoxycarbonyl", the examiner finds (<u>id.</u>), "[t]he disclosure does not provide guidance as to what functional groups, and/or rings can be considered as an amino protecting group." Accordingly, the examiner concludes (<u>id.</u>), "one skilled in the art will have to carry out undue experimentation, as the chemical art is unpredictable."

In response, appellants argue (Brief, page 7), "[i]t is not necessary for an [a]pplicant to teach in the specification what is well-known in the art, and aminoprotecting groups are well-known in the art." In support of this argument appellants rely on In re Fuetterer, 319 F.2d 259, 138 USPQ 217 (CCPA 1963), In re Robins, 429 F.2d 452, 166 USPQ 552 (CCPA 1970), In re Bowen, 492 F.2d 859, 181 USPQ 48 (CCPA 1974), and In re Skoll, 523 F.2d 1392, 187 USPQ

481 (CCPA 1975). However, according to the examiner (Answer, page 8), the "[c]ase laws [sic] cited by applicant are outdated. The most recent case law is (Genentech Inc. v. Novo Nordisk, 108 F.3d 1361, 42 USPQ 2d [sic] 1001 (Fed. Cir 1997)), in which the court ruled that relying on the knowledge of one skilled in the art cannot cure the deficiency in enablement." In this regard, the examiner asserts (id.), "[j]ust because a term is well-known in the art, it does not mean one skilled in the art can prepare any intermediate having any 'amino protecting group'." We will discuss each of the examiner's assertions in turn.

First, the examiner's assertion that <u>Genentech</u> stands for the proposition that "relying on the knowledge of one skilled in the art cannot cure the deficiency in enablement" is, on this record, erroneous. To the extent that the examiner is overly concerned about the publication date of case law, we note that on March 30, 2004 our appellant reviewing court rendered a decision in <u>Chiron Corp. v.</u>

<u>Genentech Inc.</u>, 363 F.3d 1247, 70 USPQ2d 1321 (Fed. Cir. 2004). According to our appellate reviewing court (<u>id.</u> at 1254, 70 USPQ2d at 1325-26, alteration original),

a patent disclosure need not enable information within the knowledge of an ordinarily skilled artisan. Thus, a patentee preferably omits from the disclosure any routine technology that is well known at the time of application. See Hybritech, 802 F.2d at 1384. At the other end of the knowledge continuum, a patent document cannot enable technology that arises after the date of application. The law does not expect an applicant to disclose knowledge invented or developed after the filing date. Such disclosure would be impossible. See In re Hogan, 559 F.2d 595, 605-06 [194 USPQ 527] (CCPA 1977). Nascent technology, however, must be enabled with a "specific and useful teaching." Genentech, Inc. v. Novo Nordisk, A/S, 108 F.3d 1361, 1368 [42 USPQ2d 1001] (Fed. Cir. 1997). The law requires an enabling disclosure for nascent technology because a person of ordinary

skill in the art has little or no knowledge independent from the patentee's instruction. Thus, the public's end of the bargain struck by the patent system is a full enabling disclosure of the claimed technology. See, e.g., J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc., 534 U.S. 124, 142 [60 USPQ2d 1865] (2001).

On this record, the examiner failed to provide any evidence that the claimed invention is directed to a nascent technology. To the contrary, the examiner did not dispute appellants' assertion (Brief, page 4) that "'amino protecting groups' are well-known and exemplified by many members, all of which are within the skill of the art of organic synthesis." Accordingly, contrary to the examiner's assertion Chiron reaffirms the well-established concept that "a patent disclosure need not enable information within the knowledge of an ordinarily skilled artisan. Thus, a patentee preferably omits from the disclosure any routine technology that is well known at the time of application."

Regarding the examiner's proffer that one skilled in the art would not be able to prepare "any intermediate having any 'amino protecting group'," we remind the examiner that "[w]hen rejecting a claim under the enablement requirement of section 112, the PTO bears an initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of the application; this includes, of course, providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement." In re Wright, 999 F.2d 1557, 1561-62, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). "[It] is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of

any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure."

In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971).

In our opinion, the examiner failed to meet his burden of establishing that appellants' disclosure does not enable the full scope of the claimed invention. The test for compliance with the enablement requirement of 35 U.S.C. § 112, first paragraph, is whether one skilled in the art would have to resort to undue experimentation in order to practice the invention as broadly as claimed. In considering this issue, we note that appellant is not required to disclose every parameter encompassed by the claims. See In re Angstadt, 537 F.2d 498, 503,190 USPQ 214, 218 (CCPA 1976). As set forth above, it is examiner's burden to show that one skilled in the art would have to resort to undue experimentation in order to practice the invention as broadly claimed. We are not persuaded by the examiner's reliance on In re Howarth, 654 F.2d 103, 107, 210 USPQ 689, 693 (CCPA 1981) in support of his assertion that appellant failed to "provide the starting material for R4, nor a source for an 'amino protecting group'...." As Howarth, F.2d at 105, 210 USPQ at 691-92 recognizes, "a patent applicant need not include in the specification that which is already known to and available to the public." In our opinion, on this record, the examiner failed to meet his evidentiary burden of establishing that a person of ordinary skill in the art would not be able to practice the claimed invention without undue

experimentation. As set forth in <u>Atlas Powder Co., v. E.I. DuPont De Nemours & Co.,</u> 750 F.2d 1569, 1576, 224 USPQ 409, 413 (Fed. Cir. 1984) "[t]he fact that some experimentation is necessary does not preclude enablement; what is required is that the amount of experimentation 'must not be unduly extensive.'"

Finally, we note that the examiner's rationale is internally inconsistent. First the examiner finds appellants' specification "enabling for R⁴ as a tert-butyl ester, tert-butyl carboxylate, or tert-butoxycarbonyl..." yet later finds "undue experimentation is inevitable for one skilled in the art to make and use compounds with R⁴ as a group other than tert.-butoxycarbonyl."

On reflection, it is our opinion that the examiner failed to meet his burden of establishing that appellants' disclosure does not enable the full scope of the claimed invention. Accordingly, we reverse the rejection of claims 12, 14, 15, 17, 19, 21, 23 and 25 under 35 U.S.C. § 112, first paragraph.

THE REJECTIONS UNDER 35 U.S.C. § 102:

Krogsgaard-Larsen:

According to the examiner (Answer, page 9), "[c]ompounds 12 and 13 on page 328 [of Krogsgaard-Larsen] are embraced by formula VIII in claim 17 with R³ as lower alkyl, and R⁴[] as an amino protecting group." We will separately discuss the merits of the rejection as it relates to compounds 12 and 13.

Compound 13

As appellants point out (Brief, page 8), "[c]ompound 13 of Krogsgaard-Larsen et al. has a trans configuration between the hydroxyl and ester groups ... [and therefore] does not encompass the compounds of claim 17, which have a cis configuration between the hydroxyl and ester groups...." We agree.

We are not persuaded by the examiner's argument (Answer, page 10, emphasis removed), "spatial orientation of a compound can flip flop from one form to the other because bonds are not static." According to the examiner (id.), if a trans-form of a compound [exists], a cis-form also exists inevitably. This is the most fundamental principle in stereo-chemistry. So, if a reference discloses a trans-form, then a cis-form will be inherently embraced." The examiner's logic eludes us. The examiner fails to explain how one of ordinary skill in the art can isolate a particular enantiomeric form of a compound, as set forth in appellants' claimed invention, whose spatial orientation "flip flops" from one spatial orientation to another. Further, it appears that the examiner is confused with regard to "the most fundamental principles" of stereo-chemistry. The trans conformation of a molecule is not the stereoisomer of the cis conformation of a molecule. To the contrary, both the trans and the cis conformations of a molecule may each have two stereo-isomers, +/- trans and +/- cis. For example, for a trans molecule of the formula set forth in appellants' claim 17, the two enantiomers can be illustrated as follows:

$$C(O)OR^3$$
 R^4

In contrast, for a cis molecule of the formula set forth in appellants' claim 17, the two enantiomers can be illustrated as follows:

Note, as the examiner explains (Answer, bridging sentence, pages 10-11), with regard to compound 12, "both the −OH and the −C(O)OCH₃ can be pointed upward [], and still have [a] cis-configuration." These compounds which are nonsuperimposable mirror images of one another are called "enantiomers." As can be seen from the illustrations, cis-enantiomers differ from enantiomers in the trans-conformation.

Accordingly, as appellants point out (Brief, page 8), despite the examiner's assertions to the contrary, the trans confirmation of a molecule, as set forth in compound 13 of Krogsgaard-Larsen, cannot anticipate a specific enantiomeric form of the cis conformation of a molecule as set forth in appellants' claimed invention.

Compound 12

As the examiner recognizes (Brief, page 10, emphasis removed), "[t]he symbol, '(±)' [as it appears in the illustration of compound 12 of Krogsgaard-Larsen], refers to optical isomers of the cis-compound." Stated differently, compound 12 of Krogsgaard-Larsen refers to a racemic mixture containing both the "+" and the "-" enantiomers of the cis configuration of compound 12. As

appellants point out (Brief, page 9), "claim 17 excludes the racemic mixture disclosed [by Krogsgaard-Larsen] as compound 12." In this regard, we remind the examiner, as set forth in Akzo N.V., Aramide Maatschappij v.o.f. v. United States Int'l Trade Comm'n, 808 F.2d 1471, 1479, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986), "[i]n addition to identity of invention, anticipation requires that a prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." Here the examiner fails to explain how the racemic mixture of compound 12 taught by Krogsgaard-Larsen provides an enabling disclosure of the specific enantiomer set forth in appellants' claimed invention.

See In re May, 574 F.2d 1082, 1090, 197 USPQ 601, 607 (CCPA 1978), citing In re Williams, 171 F.2d 319, 80 USPQ 150 (1948), "the novelty of an optical isomer is not negated by the prior art disclosure of its racemate."

For the foregoing reasons, we reverse the rejection of claim 17 under 35 U.S.C. § 102(b) as anticipated by Krogsgaard-Larsen.

Adams:

According to the examiner (Answer, page 9), "Formula X in [appellants'] claim 23 inherently embraces compound 20 on page 2356 [of Adams]. Formula XI in [appellants'] claim 25 inherently embraces compound 21 on page 2357 [of Adams]." However, as appellants point out (Brief, pages 7-8), the compound taught by Adams is in the trans-configuration, not the cis-configuration as required by appellants' claimed invention. To emphasize this "fundamental principle" of stereo-chemistry, we note that Adams resolve the enantiomers of compound 21. Scheme 3 on page 2357 of Adams, illustrates the two

enantiomeric forms (compound 21a and 21b) of the trans configuration of compound 21. <u>See</u> Adams, bridging sentence, page 2356, column 2 – page 2357, column 1; and Scheme 3, page 2357.

For the foregoing reasons, we reverse the rejection of claims 23 and 25 under 35 U.S.C. § 102(b) as anticipated by Adams.

Barbier:

According to the examiner (Answer, page 9), "Formula XI in [appellants'] claim 25 inherently embraces compounds B1-B23 listed on columns 18-21 [of Barbier]. However, as appellants point out (Brief, page 8), "[t]he exemplified compounds of Barbier et al. are all in the trans [con]formation." Therefore, appellants assert (id.), "the teaching of the trans [con]formation does not anticipate the instantly claimed, structurally distinct, cis [con]formation."

Accordingly, we reverse the rejection of claim 25 under 35 U.S.C. § 102(e) as anticipated by Barbier.

THE REJECTION UNDER 35 U.S.C. § 103:

According to the examiner (Answer, page 11), Barbier "disclose a group of intermediates represented by formula III which resembles ... [appellants'] claimed formula XI...." From this the examiner asserts (id.), "[w]hile Barbier et al. do not disclose the cis-configuration of compounds of formula III or its species, such form is suggested in the racemic mixture of cis- and trans- represented by formula III." Accordingly, the examiner concludes (Answer, page 12), since

⁴ We also note the examiner's statement (Answer, page 11), Barbier "do not disclose the cisconfiguration of compounds of formula III or its species...."

recognizes that substituents on the heterocylic ring can have [a] cis-configuration ... (see column 4, line 30) ... one of ordinary skill in the art would have been motivated to make the cis-configuration of compounds of formula III because such a configuration had been acknowledged by Barbier ... as an alternative to the transconfiguration.

According to the examiner (id.), "it is within the level of one skilled in the art to obtain the claimed cis-form from the teaching of Barbier et al., and conventional methods of resolving cis- and trans- forms."

Once again, we are compelled to point out that the trans conformation of a molecule is <u>not</u> the stereoisomer of the cis conformation of a molecule. Further, the burden is on the examiner to establish a <u>prima facie</u> case of obviousness of the claimed subject matter over prior art references. <u>In re Deuel,</u> 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). Only after that burden is met must the applicant come forward with arguments or evidence in rebuttal. <u>Id.</u> Findings of fact must be supported by substantial evidence in the record. <u>In re Gartside,</u> 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). A rejection under §103 is proper only when "the PTO establishes that the invention as claimed in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations." <u>In re Ochiai,</u> 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995) (emphasis added).

On this record, the examiner fails to provide substantial evidence in support his assertion that "it is within the level of one skilled in the art to obtain the claimed cis-form from the teaching of Barbier et al., and conventional methods of resolving cis- and trans- forms." Emphasis added. At best, the

examiner appears to have relied on a <u>per se</u> rule that the specific stereoisomers set forth in appellants' claims 25 and 26 are obvious in view of a disclosure of the trans- and cis-isomers of the generic formula set forth on column 9 of Barbier.

This is error. <u>Ochiai</u> at 1572, 37 USPQ2d at 1133 ("reliance on per se rules of obviousness is legally incorrect and must cease.").

We recognize, as set forth in <u>In re Deuel</u>, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995), that a <u>prima facie</u> case of obviousness based on structural similarity may arise if the "[s]tructural relations provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties." <u>Id.</u> at 1558, 34 USPQ2d at 1214. <u>See also, e.g., In re Payne</u>, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979) ("An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties."). However, as set forth in <u>In re Doyle</u>, 63 USPQ2d 1161, 1162 (Fed. Cir. 2002), footnote omitted,

Like a human hand, a chiral molecule cannot be superimposed on its mirror image, otherwise known as its enantiomer. Altering the relative orientation of the groups bonded to the various chiral centers of a molecule (i.e., creating a different stereoisomer of the compound) can have profound effects on the compound's properties, especially with respect to how the compound interacts with other chiral molecules.

Thus, assuming <u>arguendo</u> that it would have been <u>prima facie</u> obvious to a person of ordinary skill in the art to separate the cis- and trans-conformations of a compound of formula III in Barbier, the examiner failed to identify any evidence that it would have been <u>prima facie</u> obvious to then separate the + and – stereoisomers of the cis-conformation to arrive at appellants' claimed invention. Accordingly, we reverse the rejection of claims 25 and 26 under 35 U.S.C. § 103 as being unpatentable over Barbier.

REVERSED

Sherman D. Winters

Administrative Patent Judge

) BOARD OF PATENT

Toni R. Scheiner

Administrative Patent Judge

APPEALS AND

- 1 - 1

INTERFERENCES

Donald E. Adams

Administrative Patent Judge

Appeal No. 2003-21 Application No. 09/546,143

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